Operating instructions

Magnetically coupled centrifugal pump ProMinent® von Taine® 0807 PP and PVDF

von Taine® 0807 PP

von Taine® 0807 PVDF

Type:	☐ **0807 PP/FKM**	☐ **0807 PVDF/FKM**
	☐ **0807 PP/EPDM**	☐ **0807 PVDF/EPDM**
	Serial-No.	_____

Please enter type + serial number of the pump here !

Please read the manual instructions completely before bringing the machine into service!
Do not throw it away!
Damage caused by an operator´s error will cancel the right to all warranty claims!

Imprint:

Operating instructions Magnetically coupled centrifugal pump
ProMinent® von Taine® 0807 PP and PVDF
© ProMinent Dosiertechnik GmbH, 2010

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Specifications subject to change without notice !
Printed in Germany

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1 General information

The pump may only be used in the range of applications authorized by the manufacturer. In case of modified operating conditions, please consult your supplier and / or the manufacturer.

1.1 Authorized use of the pump

- Delivery of low-viscosity liquids resembling water.
- Delivery of acids, alcaline solutions etc.
- Delivery of gaseous fluids.
- No other than the authorized use nor any conversion of the pump are permitted.

WARNING

Make sure that the materials used for the pump are resistant to the fluids being delivered!
(see the ProMinent list of resistances)

- If you deliver crystallising fluids, make sure that the fluid does not crystallise within the pump. Should this happen, carefully clean all parts being in contact with the fluid once the pump has been shut off.

NOTE

Disassembly of the pump will cancel the right to all warranty claims!

1.2 Sound intensity level

The sound intensity level of this pump is < 70 dB (A) according to DIN EN 12639 (noise measurement of liquid pumps and pump units).

2 Safety

This operating manual gives basic instructions which are to be observed during installation, operation and maintenance of the pump. It is therefore imperative that the manual be read by the responsible personnel / operator prior to assembly and commissioning. It is always to be kept available at the installation site.

It is not only the general safety instructions contained under this main heading safety that are to be observed but also the specific information provided under the other main headings.

2.1 Identification of safety instructions in the operating manual

Safety instructions given in this manual non-compliance with which would affect safety are identified by the following symbol

(see DIN 4844-W9)

or where electrical safety is involved with

(see DIN 4844-W8)

Instructions non-compliance with which would give rise to malfunctioning of the machinery are identified by the word

WARNING

It is imperative that signs affixed to the machine, e.g.

- ☞ arrow indicating the direction of rotation
- ☞ symbols indicating fluid connection
- ☞ Warnings to protect the pump from dry-running.

be observed and kept legible.

2.2 Qualification and training of operating personnel

The personnel responsible for operation, maintenance, inspection and assembly must be adequately qualified. Scope of responsibility and supervision of the personnel must be exactly defined by the plant operator. If the staff does not have the necessary knowledge, they must be trained and instructed, which may be performed by the machine manufacturer or supplier on behalf of the plant operator. Moreover, the plant operator of the operating manual are fully understood by the personnel.

2.3 Hazards in the event of non-compliance with safety instructions

Non-compliance with the safety instructions may produce a risk to the personnel as well as to the environment and the machine and results in a loss of any right to claim damages.

For example, non-compliance may involve the following hazards:

- ☞ Failure of important functions of the machine / plant.
- ☞ Failure of specified procedures of maintenance and repair.
- ☞ Exposure of people to electrical, mechanical and chemical hazards.
- ☞ Endangering the environment owing to hazardous substances being released.

2.4 Compliance with regulations pertaining of safety work

When operating the pump, the safety instructions contained in this manual, the relevant national accident prevention regulations and any other service and safety instructions issued by the plant operator are to be observed.

2.5 Safety instructions relevant for operation

- ☞ If hot or cold machine components involve hazards, they must be guarded against accidental contact.
- ☞ Guards for moving parts (e.g. coupling) must not be removed from the machine while in operation.
- ☞ Any leakage of hazardous (e.g. explosive, toxic, hot) fluids must be drained away so as to prevent any risk occurring to persons or the environment. Statutory regulations are to be complied with.
- ☞ Hazards resulting from electricity are to be precluded (see, for examgple, the VDE Specifications and the bye-laws of the local power supply utilities).

2.6 Safety instructions relevant for maintenance, inspection and assembly work

It shall be the plant operator´s responsibility to ensure that all maintenance, inspection and assembly work is performed by authorized and qualified personnel who have adequately familiarized themselves with the subject matter by studying this manual in detail.

Any work on the machine shall only be performed when it is at a standstill, it being imperative that the procedure for shutting down the machine described in this manual be followed.
Pumps and pump units which convey hazardous media must be decontaminated. On completion of work all safety and protective facilities must be re-installed and made operative again.

Prior to restarting the machine, the instructions listed under ´Initial commissioning´ are to be observed.

The pump is magnetically coupled. Attention: Coming in contact with permanent magnetic parts during repair or maintenance work dangerously exposes to magnetic forces which, for example, may influence pacemakers. Keep your distance!

2.7 Unauthorized alterations and production of spare parts

Any modifications may be made to the machine only after concultation with the manufacturer. Using spare parts and accessories authorized by the manufacturer is in the interest of safety. Use of other parts may exempt the manufacturer from any liability.

2.8 Unauthorized modes of operation

The reliability of the machine delivered will be only guaranteed if it is used in the manner intended, in accordance with clause 1 of this manual. The limit values specified in the data sheet mut under no circumstances be exceeded.

3 Transportation and storage

3.1 Transportation

The pump is delivered by the manufacturer in a ready-to-work state. In the event of damages occurring during and due to transportation, the forwarding agent must make a factual statement. The pump should always be transported appropriately and according to the state of the art.

3.2 Storage

An eventual storage place must be absolutely dry. Make sure that the interior of the pump is protected from pollutants.

3.3 Ambient conditions required for transportation and storage

Temperature range: -10°C to 50°C.
Humidity of the air: max. 95 % relative humidity, non-condensing.

4 Functional characteristics

4.1 General description

This magnetically coupled centrifugal pump type von Taine® is a sucking single-stage centrifugal pump made of plastics and designed in modular system for horizontal mounting. The pump and electric motor are connected by a magnetic clutch which transmits the drive power to the impeller.

4.2 Design

The pump housing, impeller, impeller magnet, and magnet deviding housing are made of plastics. In the standard version, the center shaft is constructed from oxide ceramic whereas the bearings are made of oxide ceramic. The magnet deviding housing hermetically seals the fluid against all atmospheric influences. Due to the magnetic power transmission, the center shaft needs not to be sealed. In contrast to mechanically or gland sealed pumps, this system prevents any leakage of fluid at the shaft.

The pump housing parts are sealed by static o-rings. The impeller of the pump is a radial-flow wheel.
Depending on the fluid to be delivered, each component of the pump is available in various materials.

NOTE

The materials used are listed on the name plate or the delivery note!

4.3 Materials

Type	0807 PP	0807 PVDF
Pump housing	PP	PVDF
Impeller	PP	PVDF
Impeller magnet	PP	PVDF
Rear casing	PP	PVDF
Center shaft	oxide ceramic	
Bearing	oxide ceramic	
Static packings	FKM or EPDM	

5 Mounting and installation

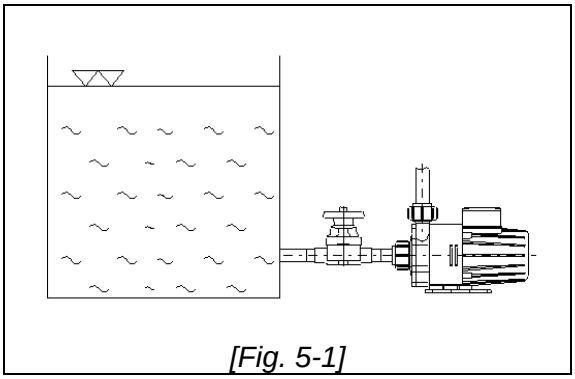
The pump should be installed at a place allowing easy access at all times. Make sure to meet the following values:

Ambient temperature	-10 °C up to +40 °C
Humidity of the air:	95 % relative humidity, non-condensing

5.1 Examples of mounting

The pump is set up to be mounted horizontally, but may also be mounted vertically, with the motor component pointing upwards.

This pump is not self-priming and therefore requires a feed supply.



[Fig. 5-1]

5.2 Hoses and tubes

The cross-sections of the tubes must correspond to the suction and delivery ports. All suction and delivery tubes to the pump housing should be free of tensile stress. The weight of the tubes must not rest on the housing!

WARNING

Do not install any quick-acting stop valves into the tubes! Pressure jerks may damage the pump housing.

5.2.1 The suction line

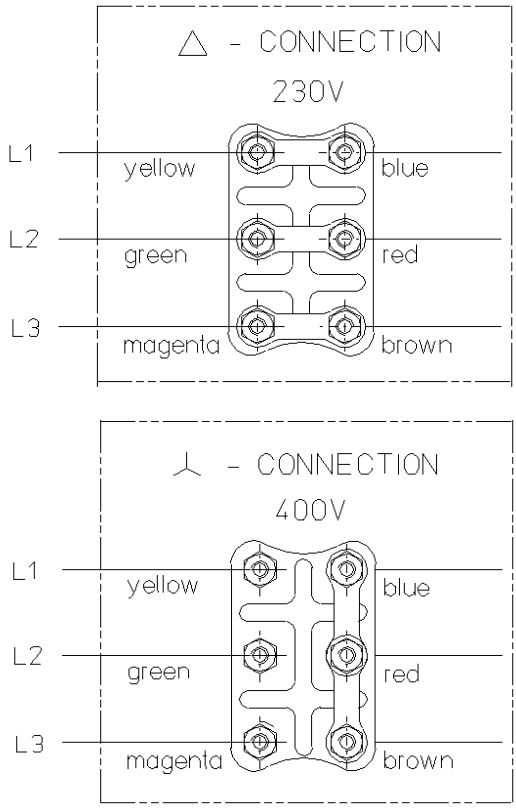
- ☞ The suction line must be a tube or hose which cannot be deformed by the resulting partial vacuum or by high temperatures.
- ☞ The suction line must be a tube or hose which cannot be deformed by the resulting partial vacuum or by high temperatures.
- ☞ When dimensioning the tubes, fittings etc., make sure that the flow resistances are kept as low as possible.
- ☞ The flow velocity within the piped suction line should not exceed the limit of 1m/s

5.2.2 The delivery line

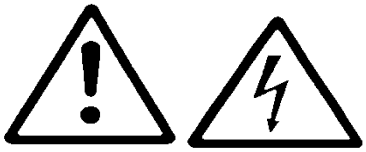
- ☞ The standard flow velocity within the suction line is 3m/s.
- ☞ To be able to adjust the flow rate, we recommend the installation of a control element inside the delivery line.

5.3 Electrical connection

The motors should be connected according to the following illustration:

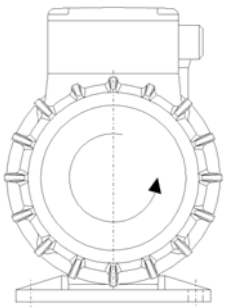


[Fig. 5-2]



All electrical connections to the pump may only be performed by experts!

☞ The direction of rotation indicated by an arrow on the pump must be respected and controlled after installation.



[Fig. 5-3]

WARNING

Do not check the direction of rotation without having filled fluid in the pump!

☞ The motor must be equipped with a motor protection switch.
☞ The power supply must have been cut for at least 5 minutes before you may start any work at the terminal box of the pump.
☞ Make sure that the data given on the name plate corresponds to the existing power supply.
☞ All electrical connections and installations of additional protection devices should be performed by an expert in accordance with the instructions of the local power suppliers and / or the Association of German Electrotechnical Engineers VDE.

6 Starting and shutdown procedures

6.1 Preparations for starting

☞ The pump housing and the suction line must be filled with water or the fluid to be delivered.

WARNING

Avoid any dry-running of the pump!

NOTE

We recommend installing dry-running protection devices such as flow indicators, contact manometers, differential pressure switches or level controllers!

☞ Tighten all screwed connections and fittings.
☞ Entirely open all shut-off devices of the suction and delivery lines.

6.2 Starting procedure

- ☞ Switch on the motor.
- ☞ Check the direction of rotation of the motor by switching it on and off in immediate succession. The direction of rotation must be in accordance with the arrow figuring on the pump.
- ☞ Adjust the operating point by slowly closing the shut-off device of the delivery line. If there is no shut-off device installed, the operating point will be adjusted automatically in accordance with the pump curve.

WARNING

Do not run the pump with a closed delivery line for a longer period of time. This may heat up the fluid inside the pump housing and thus damage interior components of the pump!

WARNING

Always protect the pump from coarse impurities and magnetisable metal particles!

6.3 Operation

If the motor has been switched off by the motor protection switch, proceed as follows:

- ☞ Before switching on the motor again, check whether the impeller rotates readily.
- ☞ Make sure that the suction line and the pump housing are filled with fluid.
- ☞ Switch on the motor.

If the pump only delivers for a short period of time and then stops delivering, the magnetic clutch has been disengaged. Proceed as described in chapter 8 below.

6.4 Shutdown procedure

- ☞ Switch off the motor.
- ☞ Close all shut-off devices.
- ☞ In case some fluid remains within the pump, secure the shut-off devices to prevent an accidental opening.

6.5 Safe disposal of waste parts

This product as a whole as well as parts of it must be disposed of in an environmentally safe way:

WARNING

Please comply with the respective regulations that are currently in force at your place (especially with regard to electronic scrap) !

As for Germany:
Used parts that have been cleaned will be accepted by the local public disposal sites.

7 Maintenance

7.1 General information

The pump is designed for continous operation and is therefore maintenance-free.

7.2 Preventive maintenance

- ☞ Clean the ventilator cowl at least **once per month** in order to prevent the motor from overheating!!
- ☞ Although bearings, center shaft and thrust rings are also designed for continuous operation, they should periodically be inspected for choking. If dirty, silty or crystallising fluids are delivered, then the pump should be inspected.

WARNING

Make sure there are no magnetisable metal particles in the working area if you assemble or disassemble the pump!

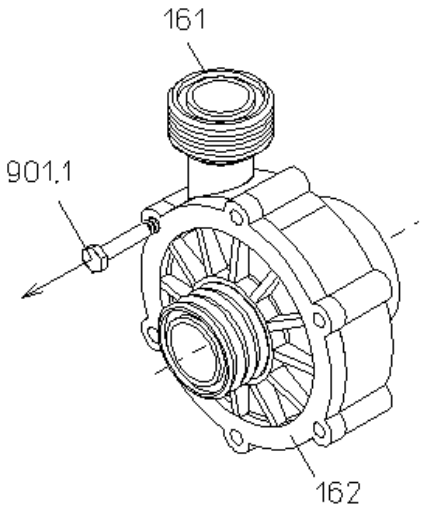
When the complete head of the pump is assembled or disassembled, magnetic forces can cause serious injury!

☞ Check the static sealings in regular intervals and replace them, if necessary.

7.3 Disassembly of the pump

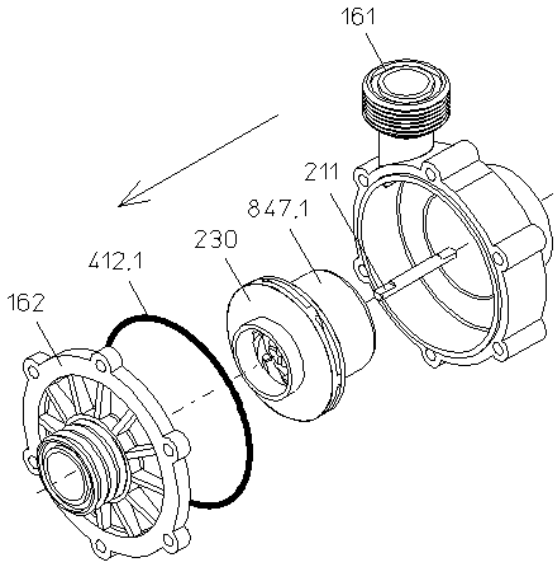
1. Remove the 6 screws (901.1) in the pump housing (101).

Required tool: fork or ring spanner!



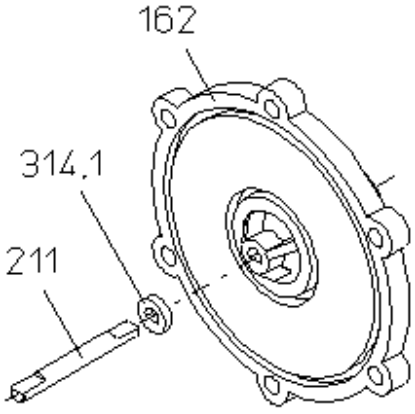
2. Take the suction flange (162) off the pump housing (161). Pull the impeller with the impeller magnet (230 + 847.1) and the center shaft (211) out of the magnet deviding housing (161).

No tools required!



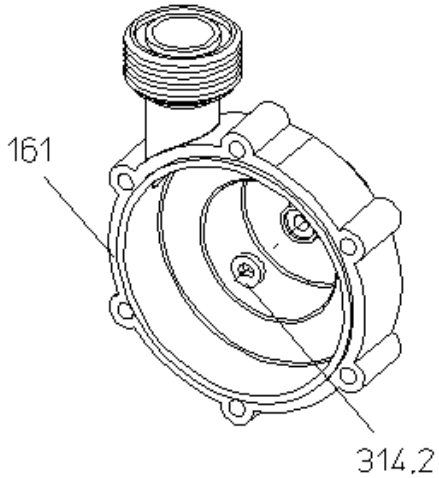
3. Take the thrust ring (314.2) off the suction flange (162).

Required tool: center shaft (211)!



4. Take the thrust ring (314.1) off the magnet deviding housing (161).

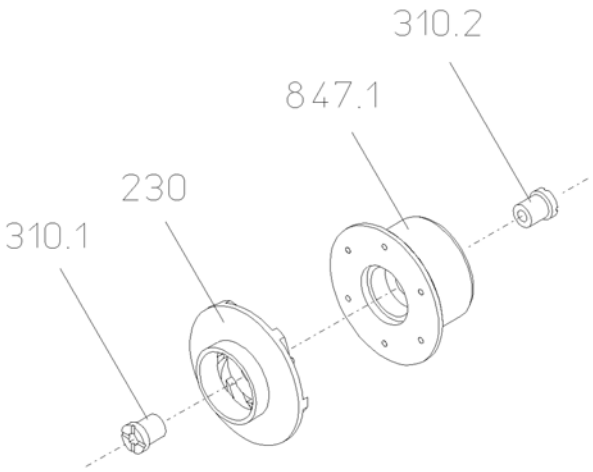
Required tool: center shaft (211)!



7.4 Re-assembly of the pump

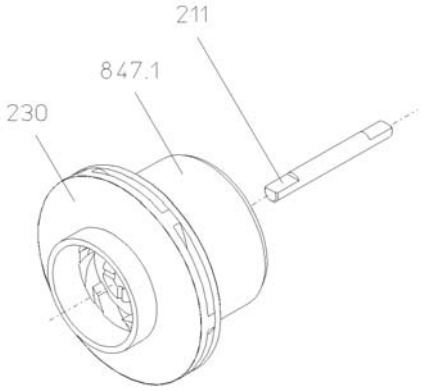
1. Install bearings (310.1 and 310.2) to impeller magnet (847.1) and impeller (230).

   Required tool: Lever press!



2. Make sure that the impeller with impeller magnet (230+847.1) and bearings (310.1+310.2) installed properly rotates around the center shaft.

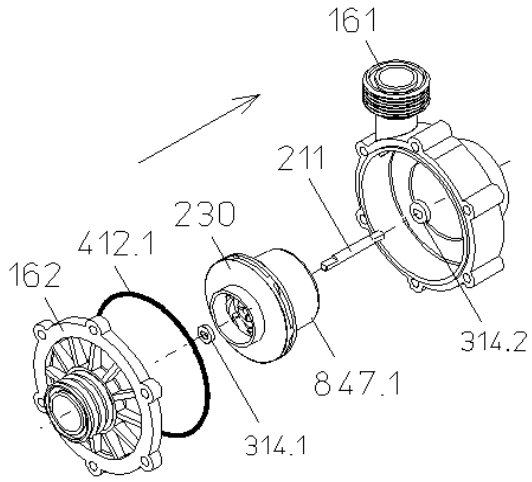
   No tools required !



3. Put the center shaft (211) into the thrust ring (314.2) of the pump housing (161) and fit the o-ring (412.1) into the groove of the suction flange (162).

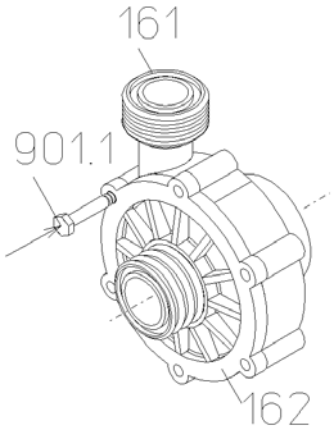
   Then slide the impeller with impeller magnet (230+847.1) installed onto the center shaft (211) and mount thrust ring (314.1) and suction flange (162) to it.

   No tools required !



4. Crosswise fasten the complete pump housing to the motor using 6 hexagon head cap screws (901.1).

   Required tool: fork or ring spanner!



WARNING

Once the complete head of the pump has been assembled, the impeller (230) and the impeller magnet (847.1) should be able to slide axially on the center shaft (211)!

- Any other repair than the replacement of worn parts should be done by an expert, since inappropriate maintenance work usually results in unnecessary costs.
- If the pump will not be in operation for a longer period of time, it should be cleaned carefully. Otherwise you risk that residues remaining in the pump may harden and jam the impeller, once the pump is started again.

8 Troubleshooting

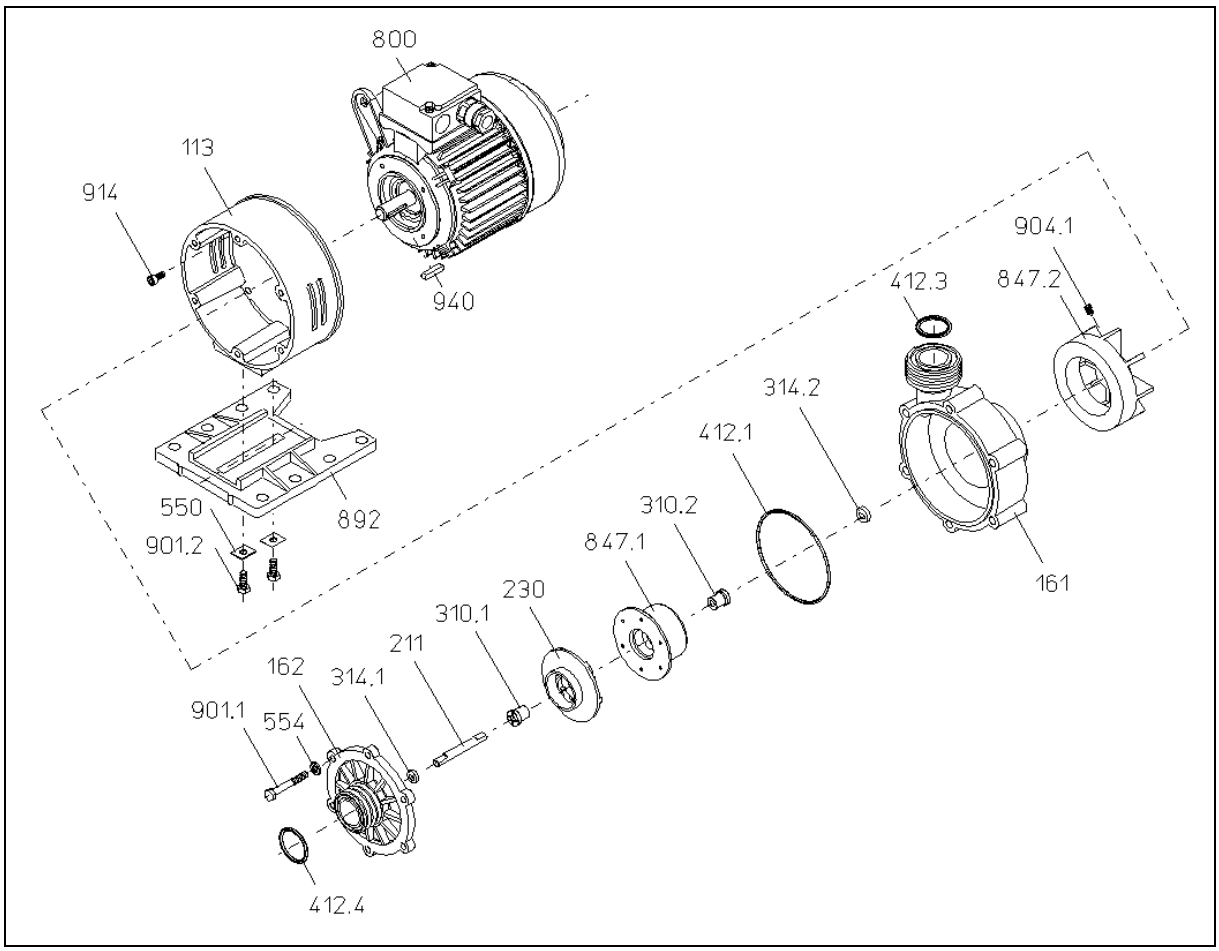
Malfunction	Causes	Corrective action
Pump does not work when switched on	No voltage	Test the voltage
	Impurities in the pump housing	Remove the impurities
Magnetic clutch is disengaged	Specific gravity and/or viscosity of the fluid is too high	Reduce the delivery rate; use a stronger magnetic clutch and a more powerful motor
	Pump was switched off, then switched on again before the rotor stopped	The rotor should have stopped before the pump can be switched on again
Motor is overheating	Clogged ventilator cowl	Clean the ventilator and the cowl
Pump is working, but not delivering	Gas accumulation in the lines	Evacuate the lines
Too much flow noise	Cavitation	Increase the suction line cross-section
		Reduce the delivery rate
		cool down the fluid
Pump is not sucking	No fluid in the pump	Open the vane
Delivery rate too low	Air in the system	Evacuate the system
	Suction and delivery line cross-sections are too small (significant losses)	Increase the suction and delivery line cross-sections
	Valve is not entirely open	Entirely open the valve
Delivery rate too high	Pump losses are less significant than presumed	Install a flow control valve in the delivery line

9 Technical data

Order- No.	1023090	1023096	1028552	1028568
Pump type	von Taine® 0807 PP/FKM	von Taine® 0807 PVDF/FKM	von Taine® 0807 PP/EPDM	von Taine® 0807 PVDF/EPDM
Hydraulic data				
Maximum flow	6600 l/h	6600 l/h	6600 l/h	6600 l/h
Operating range	60 - 6600 l/h	60 - 6600 l/h	60 - 6600 l/h	60 - 6600 l/h
Maximum head	7,9 mWC	7,9 mWC	7,9 mWC	7,9 mWC
Maximum system pressure at 20°C	2,5 bar	3,5 bar	2,5 bar	3,5 bar
Electrical data				
Motor output	250 W	250 W	250 W	250 W
Rated voltage $_{50\ Hz}$ (V)	230/400	230/400	230/400	230/400
Rated current $_{50\ Hz}$ (A)	1,1 / 0,65	1,1 / 0,65	1,1 / 0,65	1,1 / 0,65
No. of revolutions $_{50\ Hz}$ (rpm)	2760	2760	2760	2760
cos φ	0,93	0,93	0,93	0,93
Protection class	IP 55	IP55	IP 55	IP55
Temperature class	F	F	F	F
Further data				
Max. temperature of the medium	80 °C	95 °C	80 °C	95 °C
Maximum viscosity	<20 mPas	<20 mPas	<20 mPas	<20 mPas
Maximum ambient temperature	40 °C	40 °C	40 °C	40 °C
Maximum density of the medium	1,2 - 1,8 kg/dm³	1,2 - 1,8 kg/dm³	1,2 - 1,8 kg/dm³	1,2 - 1,8 kg/dm³
Suction port	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
Discharge port	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
Pump housing	PP	PVDF	PP	PVDF
Impeller	PP	PVDF	PP	PVDF
Colour of delivery unit	black	white	black	white
Bearing	oxide ceramic	oxide ceramic	oxide ceramic	oxide ceramic
Center shaft	oxide ceramic	oxide ceramic	oxide ceramic	oxide ceramic
Thrust ring (impeller)	teflon-graphite	teflon-graphite	teflon-graphite	teflon-graphite
Thrust ring (housing)	oxide ceramic	oxide ceramic	oxide ceramic	oxide ceramic
Sealing material	FKM	FKM	EPDM	EPDM
Colour of motor	RAL 2003	RAL 2003	RAL 2003	RAL 2003
Weight	5,0 kg	5,2 kg	5,0 kg	5,2 kg
Dimensions LxTxH [mm]	283x138x185	283x138x185	283x138x185	283x138x185

10 Spare parts

10.1 Exploded view



10.2 Bill of materials von Taine® 0807 PP/FKM

Serial-No: _____

Pos.	Qty.	Order-No.	Designation	Material	Qty.
113	1	PUMA.00.0250.071	lantern	Al	
161+314.2	1	PUMA.05.0050.036	pump housing with thrust ring	polypropylene	
162	1	PUMA.05.0050.100	suction flange	polypropylene	
211	1	PUMA.05.0050.083	center shaft 30mm	oxide ceramic	
230	1	PUMA.10.0110.001	impeller Ø85/6mm	polypropylene	
310.1	1	PUMA.05.0050.046	bearing	oxide ceramic	
310.2	1	PUMA.05.0050.046	bearing	oxide ceramic	
314.1	1	PUMA.05.0050.040	thrust ring	oxide ceramic	
412.1	1	PUMA.05.0050.092	o-ring 90x2,5	FKM	
412.3	1	FISF.00.0000.181	o-ring 26x3,5	FKM	
412.4	1	PUMA.05.0050.120	o-ring 30x3	FKM	
550	2	PUMA.05.0050.115	rectangular washer		
554	6	PUMA.00.0090.150	plain washer Ø6,4 DIN125	inox	
800	1	PUMA.00.0250.004	motor 250W 230/400V 50Hz		
847.1	1	PUMA.02.B.03 0055	impeller magnet Ø85	polypropylene	
847.2	1	PUMA.10.0110.120	drive magnet 15(18S) shaft: 14mm		
892	1	PUMA.00.0090.140	mounting plate	polypropylene	
901.1	6	PUMA.05.0050.110	hexagon head cap screw M6x45 DIN931	inox	
901.2	2	PUMA.00.0750.021	hexagon head cap screw M6x16 DIN933	inox	
904.1	1	PUMA.05.0050.007	threaded pin M6x10 DIN914	45H	
914	4	PUMA.00.0090.030	hexagon socket screw M5x12	inox	
940	1	PUMA.00.0370.029	feather 5x25x5		

10.3 Bill of materials von Taine® 0807 PVDF/FKM

Serial-No: _____

Pos.	Qty.	Order-No.	Designation	Material	Qty.
113	1	PUMA.00.0250.071	lantern	Al	
161+314.2	1	PUMA.05.0050.064	pump housing with thrust ring	PVDF	
162	1	PUMA.05.0050.101	suction flange	PVDF	
211	1	PUMA.05.0050.083	center shaft 30mm	oxide ceramic	
230	1	PUMA.10.0110.002	impeller Ø83,2/5,2mm	PVDF	
310.1	1	PUMA.05.0050.046	bearing	oxide ceramic	
310.2	1	PUMA.05.0050.046	bearing	oxide ceramic	
314.1	1	PUMA.05.0050.040	thrust ring	oxide ceramic	
412.1	1	PUMA.05.0050.092	o-ring 90x2,5	FKM	
412.3	1	FISF.00.0000.181	o-ring 26x3,5	FKM	
412.4	1	PUMA.05.0050.120	o-ring 30x3	FKM	
550	2	PUMA.05.0050.115	rectangular washer		
554	6	PUMA.00.0090.150	plain washer Ø6,4 DIN125	inox	
800	1	PUMA.00.0250.004	motor 250W 230/400V 50Hz		
847.1	1	PUMA.02.B.03 0083	impeller magnet Ø83mm	PVDF	
847.2	1	PUMA.10.0110.120	drive magnet 15(18S) shaft: 14mm		

Pos.	Qty.	Order-No.	Designation	Material	Qty.
892	1	PUMA.00.0090.140	mounting plate	polypropylene	
901.1	6	PUMA.05.0050.110	hexagon head cap screw M6x45 DIN931	inox	
901.2	2	PUMA.00.0750.021	hexagon head cap screw M6x16 DIN933	inox	
904.1	1	PUMA.05.0050.007	threaded pin M6x10 DIN914	45H	
914	4	PUMA.00.0090.030	hexagon socket screw M5x12	inox	
940	1	PUMA.00.0370.029	feather 5x25x5		

10.4 Bill of materials von Taine® 0807 PP/EPDM

Serial-No: _____

Pos.	Qty.	Order-No.	Designation	Material	Qty.
113	1	PUMA.00.0250.071	lantern	Al	
161+314.2	1	PUMA.05.0050.036	pump housing with thrust ring	polypropylene	
162	1	PUMA.05.0050.100	suction flange	polypropylene	
211	1	PUMA.05.0050.083	center shaft 30mm	oxide ceramic	
230	1	PUMA.10.0110.001	impeller Ø85/6mm	polypropylene	
310.1	1	PUMA.05.0050.046	bearing	oxide ceramic	
310.2	1	PUMA.05.0050.046	bearing	oxide ceramic	
314.1	1	PUMA.05.0050.040	thrust ring	oxide ceramic	
412.1	1	PUMA.05.0050.093	o-ring 90x2,5	EPDM	
412.3	1	FISF.00.0000.180	o-ring 26x3,5	EPDM	
412.4	1	PUMA.05.0050.121	o-ring 30x3	EPDM	
550	2	PUMA.05.0050.115	rectangular washer		
554	6	PUMA.00.0090.150	plain washer Ø6,4 DIN125	inox	
800	1	PUMA.00.0250.004	motor 250W 230/400V 50Hz		
847.1	1	PUMA.02.B.03 0055	impeller magnet Ø85	polypropylene	
847.2	1	PUMA.10.0110.120	drive magnet 15(18S) shaft: 14mm		
892	1	PUMA.00.0090.140	mounting plate	polypropylene	
901.1	6	PUMA.05.0050.110	hexagon head cap screw M6x45 DIN931	inox	
901.2	2	PUMA.00.0750.021	hexagon head cap screw M6x16 DIN933	inox	
904.1	1	PUMA.05.0050.007	threaded pin M6x10 DIN914	45H	
914	4	PUMA.00.0090.030	hexagon socket screw M5x12	inox	
940	1	PUMA.00.0370.029	feather 5x25x5		

10.5 Bill of materials von Taine® 0807 PVDF/EPDM

Serial-No: _____

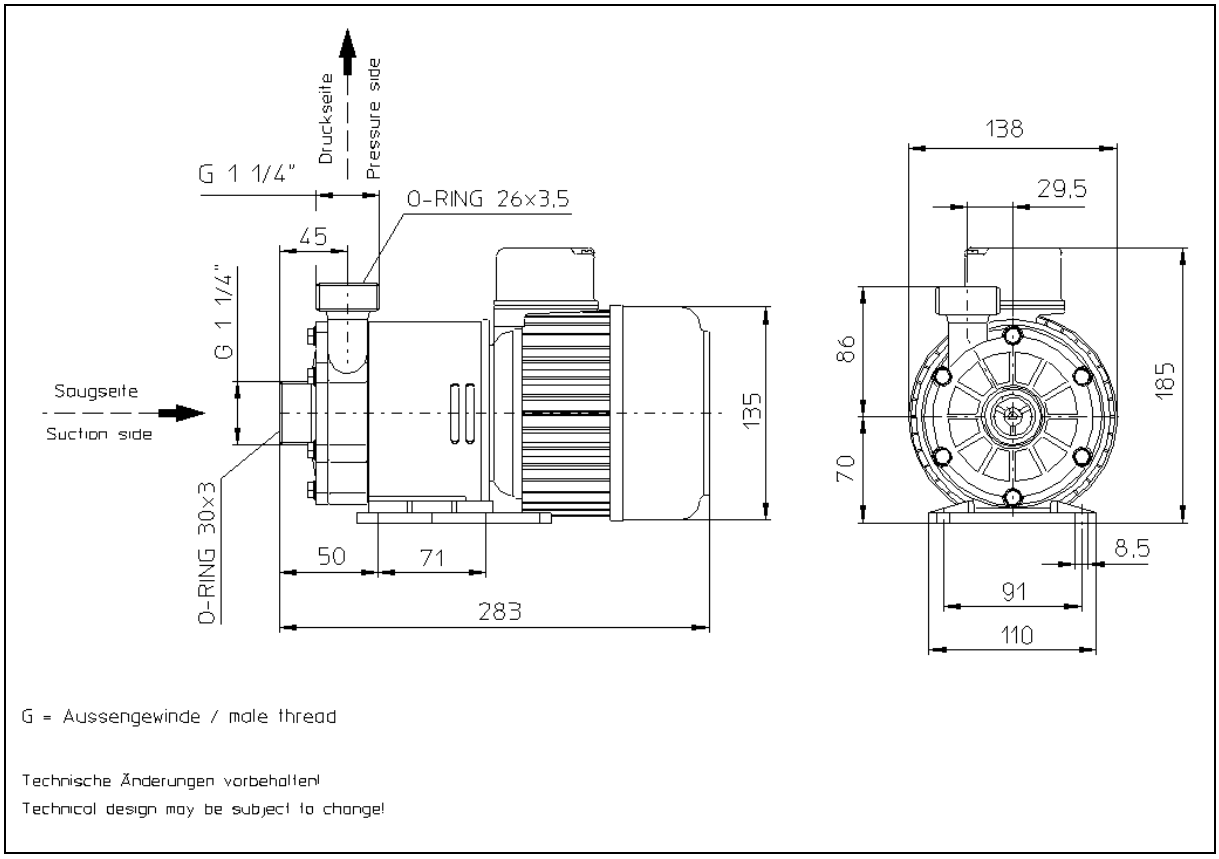
Pos.	Qty.	Order-No.	Designation	Material	Qty.
113	1	PUMA.00.0250.071	lantern	Al	
161+314.2	1	PUMA.05.0050.064	pump housing with thrust ring	PVDF	
162	1	PUMA.05.0050.101	suction flange	PVDF	
211	1	PUMA.05.0050.083	center shaft 30mm	oxide ceramic	
230	1	PUMA.10.0110.002	impeller Ø83,2/5,2mm	PVDF	

Pos.	Qty.	Order-No.	Designation	Material	Qty.
310.1	1	PUMA.05.0050.046	bearing	oxide ceramic	
310.2	1	PUMA.05.0050.046	bearing	oxide ceramic	
314.1	1	PUMA.05.0050.040	thrust ring	oxide ceramic	
412.1	1	PUMA.05.0050.093	o-ring 90x2,5	EPDM	
412.3	1	FISF.00.0000.180	o-ring 26x3,5	EPDM	
412.4	1	PUMA.05.0050.121	o-ring 30x3	EPDM	
550	2	PUMA.05.0050.115	rectangular washer		
554	6	PUMA.00.0090.150	plain washer Ø6,4 DIN125	inox	
800	1	PUMA.00.0250.004	motor 250W 230/400V 50Hz		
847.1	1	PUMA.02.B.03 0083	impeller magnet Ø83mm	PVDF	
847.2	1	PUMA.10.0110.120	drive magnet 15(18S) shaft: 14mm		
892	1	PUMA.00.0090.140	mounting plate	polypropylene	
901.1	6	PUMA.05.0050.110	hexagon head cap screw M6x45 DIN931	inox	
901.2	2	PUMA.00.0750.021	hexagon head cap screw M6x16 DIN933	inox	
904.1	1	PUMA.05.0050.007	threaded pin M6x10 DIN914	45H	
914	4	PUMA.00.0090.030	hexagon socket screw M5x12	inox	
940	1	PUMA.00.0370.029	feather 5x25x5		

Subject to technical alteration!

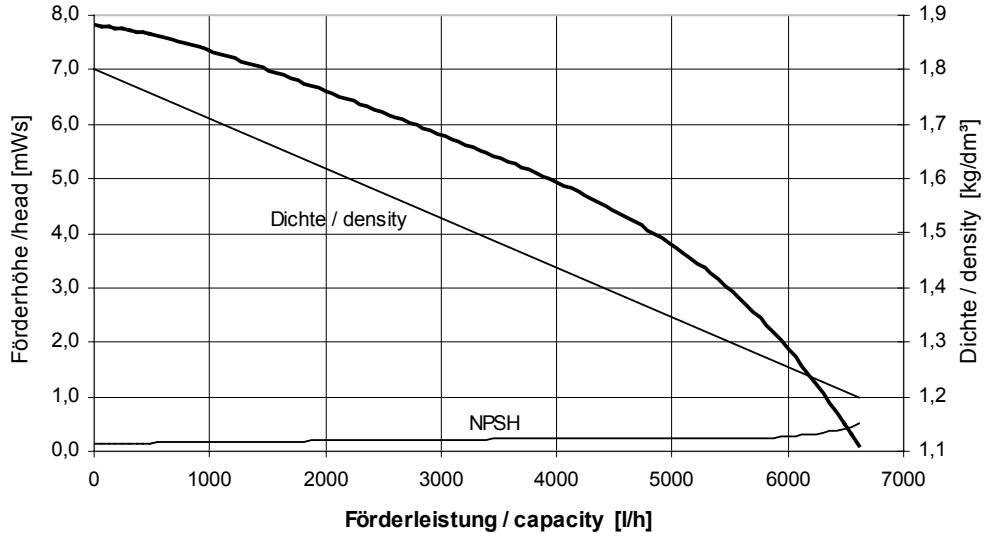
11 Appendix

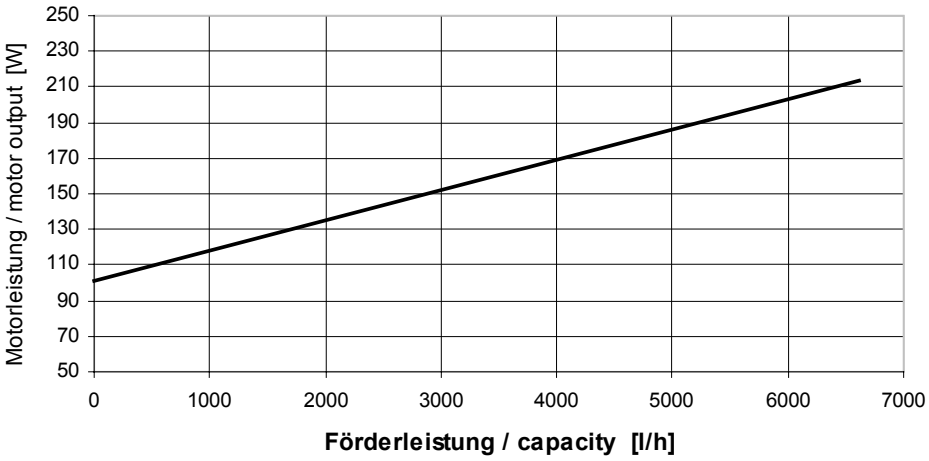
11.1 Dimensional drawing of von Taine® 0807 PP and PVDF

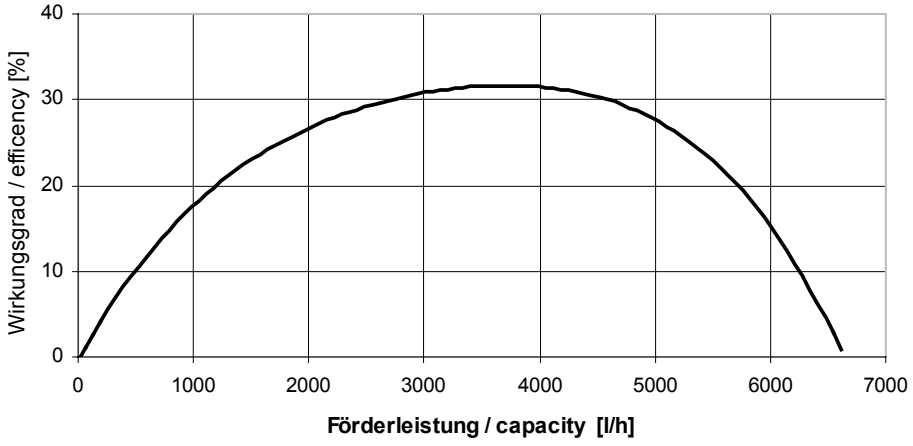


11.2 Characteristic curves

von Taine® 0807 PP/PVDF







11.3 Motor data sheet

Motor Datenblatt

Motor data sheet
Fiche technique pour moteur

Motor-Typ motor type type du moteur	D102 A 32/2		**Leistungsfaktor cosφ** power factor facteur de puissance	0,93	
Maschinenart type of machine désignation	3-ph. Motor		**Wirkungsgrad** efficiency rendement	66,5	%
Bauform mounting construction	IM B14		**Wärmeklasse** temperature class classe d´isolement	F	
Bemessungsleistung rated output puissance nominale	250	W	**Anzugsstrom** starting current courant de démarrage	4,7	fach fold fois
Schutzart protection class degré de protection	IP55		**Anzugsmoment** starting torque couple de démarrage	2,7	fach fold fois
Bemessungsspannung rated voltage tension nominale	230/400 V		**Kippmoment** pull-out torque couple de décrochage	2,9	fach fold fois
Bemessungsstrom rated current courant nominal	1,1 / 0,65 A		**Umgebungstemperatur** ambient temperature température ambiante	max. 40 °C	
Bemessungsfrequenz rated frequency fréquence nominale	50Hz		**Schaltung** connection branchement	Y	
Bemessungsdrehzahl rated speed vitesse nominale	2760	U/min. rpm t/mn	**Identcode** identcode code d´identification		
Pumpentyp pump type type de pompe	Kreiselpumpe mit Magnetkupplung				

Anmerkung comment remarque	Die Daten entsprechen den Angaben der Motorenhersteller. Kenndaten funktionsgleicher Motoren anderer Hersteller ändern sich nur unwesentlich. Angabe ohne Gewähr.
	The data correspond to the details given by the motor manufacturers. Ratings of motors with the same functions made by other producers show insignificant changes only. This information is supplied without liability.
	Les données techniques correspondent au descriptif du fabricant des moteurs. Les données techniques de moteurs similaires chez d´autres fabricants varient très peu. Ces données sont d´ordre général.

ProMinent Dosiertechnik GmbH · 69123 Heidelberg · Germany	Nr. / No.
	Datum / Date 05.12.2003

11.4 EC Declaration of Conformity

EC Declaration of Conformity

We hereby declare,

ProMinent Dosiertechnik GmbH
Im Schuhmachergewann 5 - 11
D - 69123 Heidelberg

that the following designated product complies with the pertinent fundamental safety and health requirements of the EC Directive in terms of its design and construction and in terms of the version marketed by us.
This declaration loses its validity in the event of a modification to the product not agreed with us.

Description of the product:	***Circulation pump***
Product type:	***vonTAINE***
Serial no.:	***refer to nameplate on the device***
Pertinent EC Directives:	***EC Machinery Directive (2006/42/EC)*** ***EC Low Voltage Directive (2006/95/EC)*** ***EC EMC Directive (2004/108/EC)***
Applied harmonised standards in particular:	***EN ISO 12100-1, EN ISO 12100-2, EN 809***
technical documents have been compiled by:	***Norbert Berger*** ***Im Schuhmachergewann 5-11*** ***DE-69123 Heidelberg***
Date / Manufacturer - Signature :	*04.01.2010*
Details of the signatory:	*Joachim Schall, Head of Research and Development*

Anschriften- und Liefernachweis durch den Hersteller /
Addresses and delivery by the manufacturer /
Adresses et liste des fournisseurs fourniesa par le constructeur /
Para informase de las direcciones de los distribuitores, dirigirse al fabricante

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